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their qualifications to Dean Edward Ellery, Union College, Schenectady, N. Y., before August 1.

AT the annual meeting of the American Association of Pathologists and Bacteriologists, held in Cleveland on March 24, it was voted to hold the next meeting in connection with the Triennial Congress of American Physicians and Surgeons in Washington, during May, 1922. The officers elected for the year were: *President*, Harry T. Marshall; *Vice-president*, Paul A. Lewis; *Secretary*, Howard T. Karsner; *Treasurer*, Frank B. Mallory. Other members of the Council are: Dr. Eugene L. Opie, Dr. Oskar Klotz, Dr. James Ewing, Dr. H. E. Robertson.

THE *Journal* of the American Medical Association states that an organization has been formed, the *Notgemeinschaft* for German science, which has been discussing ways and means to promote scientific research in Germany. The *Medizinische Klinik* quotes from the proceedings that, of the total 3,000 German scientific periodicals, 400 are to be continued with the aid of the organization. To make up for the lack of foreign publications during the war, a large sum will be appropriated to insure that all the important foreign journals will be represented in Germany at least by one or two copies of those published during the last few years, while the current numbers will be obtained by exchange. A purchasing and loan center for scientific material and instruments is to be installed at some central point to maintain the experimental research of the country on a higher limit. It is also planned to supply animals for experiments in medical and biologic research.

THE University of Michigan Biological Station will hold its thirteenth session for instruction and research on the shores of Douglas Lake, Cheboygan County, Michigan, from July 5 to August 26. Instruction in zoology will be given by Professors George R. La Rue and Paul S. Welch, University of Michigan; Frank Smith, University of Illinois; Zeno P. Metcalf, North Carolina State College of Ag-

riculture and Engineering; and in botany by Professors Frank C. Gates, Kansas State Agricultural College; George E. Nichols, Yale University, and John H. Ehlers, University of Michigan. Mrs. Lois S. Ehlers, of Ann Arbor, is to be dean of women. Mr. Harry C. Fortner, University of Tennessee; Dr. Minna E. Jewell, Milwaukee-Downer College; and Miss Alice E. Keener will serve as assistants. Under certain conditions, properly qualified graduate students may complete the requirements for the M.A. or M.S. degree by working at the station through three or four summer sessions. Inquiries should be addressed to Professor George R. La Rue, director, University of Michigan, Ann Arbor, Michigan.

UNIVERSITY AND EDUCATIONAL NOTES

A GIFT of \$300,000 has been made by the General Education Board to the million-dollar endowment fund of the University of the South.

DR. PHILLIP B. WOODWORTH, formerly dean of the engineering faculty at Lewis Institute and recently in charge of the educational work of the government as director of the Central District, has been elected president of the Rose Polytechnic Institute.

PROFESSOR HENRY P. TALBOT, professor of analytical chemistry and chairman of the faculty, has been appointed acting dean of the Massachusetts Institute of Technology.

As one step in the reconstruction plans of Yale University the subjects of pharmacology and experimental medicine have been combined as a university department with the title of department of pharmacology and toxicology, the chairman of which is Dr. Frank P. Underhill. The functions of the new department are three-fold: teaching, research and service to the community and state. Special attention will be devoted to the training of future investigators and teachers, and to the chemistry and physiology of the action of drugs and poisons.

At the University of Pennsylvania, the fol-

lowing promotions have been made: Dr. C. B. Bazzoni to be professor of physics, Dr. George Gailey Chambers and Dr. Howard Hawks Mitchell to be professors of mathematics and Dr. Karl Greenwood Miller to be assistant professor of psychology.

DISCUSSION AND CORRESPONDENCE

THE GEOGRAPHICAL DISTRIBUTION OF HYBRIDS

It is often assumed by systematic botanists in this country that natural hybrids between species can only exist within the common range of the parent species. This opinion has been emphasized in a caustic criticism of Brainerd and Peitersen's recent article entitled "Blackberries of New England—their classification."¹ In the article cited,² the following expression appears:

. . . no one, not specially forewarned or gifted with remarkable intuition, finding *Rubus frondosus* ("*R. pergratus* × *setosus*") superabundant in Coos County, New Hampshire, *R. glandicaulis* ("*R. allegheniensis* × *sentosus*") in the thickets of Prince Edward Island, where *R. setosus* is unknown, or *R. arenicola* ("*R. Baileyanus* × *frondosus*") dominant on dry barrens of Nova Scotia where *R. Baileyanus* is unknown and where *R. frondosus* is represented only by *R. recurvans*, can guess in which key to trace his species.

A number of similar quotations might be cited from the same source all involving the negation of the possibility of the occurrence of a hybrid beyond the range of the parent species.

It would seem reasonable to appeal to the better known floras of Europe in a case of this kind, and no one can perhaps be quoted with more effect on this important subject than Anton Kerner von Marilaun. In the second volume of his classic "Pflanzenleben," as well as in the "Oesterreichische botanische Zeitschrift" (Vol. 21 (1871)), this distinguished author has cited a large number of cases of natural hybrids.

Perhaps the most interesting example in this connection is the hybrid *Nuphar intermedium* which is a cross between *Nuphar*

¹ Vermont Agricultural Experiment Station, Bulletin 217, Burlington, Vermont.

² *Rhodora*, Vol. 22, pp. 185-191.

luteum and *Nuphar pumilum*, found distributed from the Black Forest and the Vosges northward into Russia and Lapland. In the southern part of its range, the hybrid is rarer and less fertile than it is further north. It is capable of extending its latitude northward of the range of both the parent species. Parallel cases are supplied by hybrids of *Epilobium*, *Brunella*, *Primula*, *Linnaria*, *Rumex*, *Micromeria*, *Pulsatilla*, etc. In these various genera Kerner describes hybrids between wild species which often occur beyond the range of one or both of the parent species. Since the data supplied by Kerner on this subject can scarcely be questioned, it would appear that the absence of one or both of the parent species of a supposed hybrid in a given region is no valid argument against the hybrid origin of such an intermediate form. We have apparently still much to learn from our European colleagues both as regards accuracy and breadth of view in the matter of geographical distribution of hybrids. In the light of the above it does not appear necessary that the statements of Brainerd in regard to probable natural hybrids of *Rubus* should be accorded less credence and respect than have been given to his classic results in the case of natural hybrids in the genus *Viola*.

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STAR DIAMETERS

TO THE EDITOR OF SCIENCE: Referring to the communication of Professor Fessenden concerning star diameters (SCIENCE, March 25, 1921, page 287-8), allow me to say that it does not seem possible that the measured diameter of Betelgeuse is affected by a gravitational displacement. In the first place, there are stars, of solar type for example, in connection with which the conditions would seem to be far more favorable for such a displacement and yet these objects show no appreciable disk. Further, we know that light reacts to a gravitational field in such a manner that there is no permanent acceleration in the direction of propagation. This fact reduces the possibility of a displacement to a